

# Late post partum hemorrhage - causes and defining aspects: Case series in Zainoel Abidin General Hospital, Banda Aceh, Indonesia

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**Abstract.** Improving skill and knowledge in making a diagnosis and management of late post partum hemorrhage. Globally, more than half a million women die annually due to pregnancy and childbirth. Bleeding causes 28% of the direct causes of maternal deaths and remains the most common cause of maternal death. In developing countries, several countries have maternal mortality ratio over 1000 women per 100,000 live births, and WHO statistics illustrates that 25% of maternal deaths resulting from post partum hemorrhage, which counted more than 100,000 maternal deaths per year. Postpartum hemorrhage can be divided into 2 types: early postpartum hemorrhage, which occurs within 24 hours of delivery, and late postpartum hemorrhage, which occurs 24 hours to 6 weeks after delivery. Most cases of postpartum hemorrhage, greater than 99%, are early postpartum hemorrhage. Notably, most women are still under the care of their delivering provider during this time. But a few are considered late postpartum hemorrhage. Here we presented case series consisted of two cases with late postpartum hemorrhage. Both of them enrolled in Zainoel Abidin General Hospital OBGYN emergency ward as an outpatient post c-section patient. The first case was a 38 years old Indonesian woman, Parity 4, post-caesarean section that comes with hypovolemic shock and post partum hemorrhage and foul smelling lochia. Six days after treatment the patient is discharged with good condition with abnormalities found in the form of disturbances of uterine contractions and uterine infection. The second case was a 19 years old, parity 1, post-Caesarean section 120 days ago for CPD indication that comes with recurrent bleeding after the operation. Curettage of the endometrium was then done to the patient in Bireun Hospital prior to the Zainoel Abidin General Hospital, but the bleeding persisted. Patients were then treated for 10 days and discharged with good condition with a diagnosis of abnormal uterine bleeding. With many women delivering outside of hospitals and early postpartum hospital discharge being a growing trend, postpartum hemorrhage that presents to the emergency department may be either early or late. Late post partum hemorrhage though a minority still poses great risk to maternal health. Key management of both early and late HPP are rapid assesment and diagnosis of conditions, restoration of blood volume and simultaneously search for the cause. HPP diagnosis is confirmed by observing the amount of bleeding and the patient's clinical symptoms. Management of HPP requires teamwork and a systematic yet comprehensive management.

**Key words:** Late, post partum, hemorrhage

## Introduction

In the developing world, postpartum haemorrhage (PPH) accounts for up to half of all maternal deaths. Even in developed countries, life-threatening PPH occurs in about 1 in 1,000 deliveries. PPH refers to the loss of more than 500 mL of blood from the genital tract after delivery. A volume of 500 mL is an arbitrary cutoff volume. In an anaemic patient, even less blood loss may cause morbidity and mortality. During caesarean sections, many obstetricians would consider blood loss of 1,000 mL as a cutoff point. There are 2 types of postpartum hemorrhage, the first one is early postpartum hemorrhage, which occurs within 24 hours of delivery, and the other are late postpartum hemorrhage. The American College of Obstetricians and Gynecologists (2006) defines *secondary postpartum hemorrhage* bleeding 24 hours to 12 weeks after delivery.<sup>3</sup> This uncommon complication which affect 1-3% of all deliveries is underestimated because of difficulties in evaluating blood loss by only visual observation. We present 2 case of late PPH that was successfully managed in our hospital.

## Case Presentation

### **History, examination and management**

The first case was a 38 years old Indonesian woman, Parity 4, post cesarean delivery 13 days before for dystocia indication. After the operation, the patient was experiencing early post partum hemorrhage due to uterine atony. The patient came to our center with hypovolemic shock and post partum hemorrhage and foul smelling lochia. The patient was ill-looking and clinically pale. The pulse rate was 110 beats per minute and the blood pressure was 120/80 mmHg. The respiratory rate was 24 cycles per minute. Abdominal

sonography showed a subinvoluntary uterine inconsistent with 17 days-post parturient uterine (Figure 1). Blood tests showed that the patient is anemic with hemoglobin 5.4 g/dl and an increase in the d-dimer level and also marked leucytoses with level as high as  $28.000/\text{mm}^3$ . The patient's blood group was A Rhesus positive. The patient is then treated with uterotonic agents such as oxytocyn and methergin, and packed red cells transfusion is then performed. Antibiotics were also given in form of triple drug therapy, that is ceftriaxone and metronidazole. Patient were also given tranexamic acid and Vit K injection. Six days after the treatment the patient is discharged with good condition.

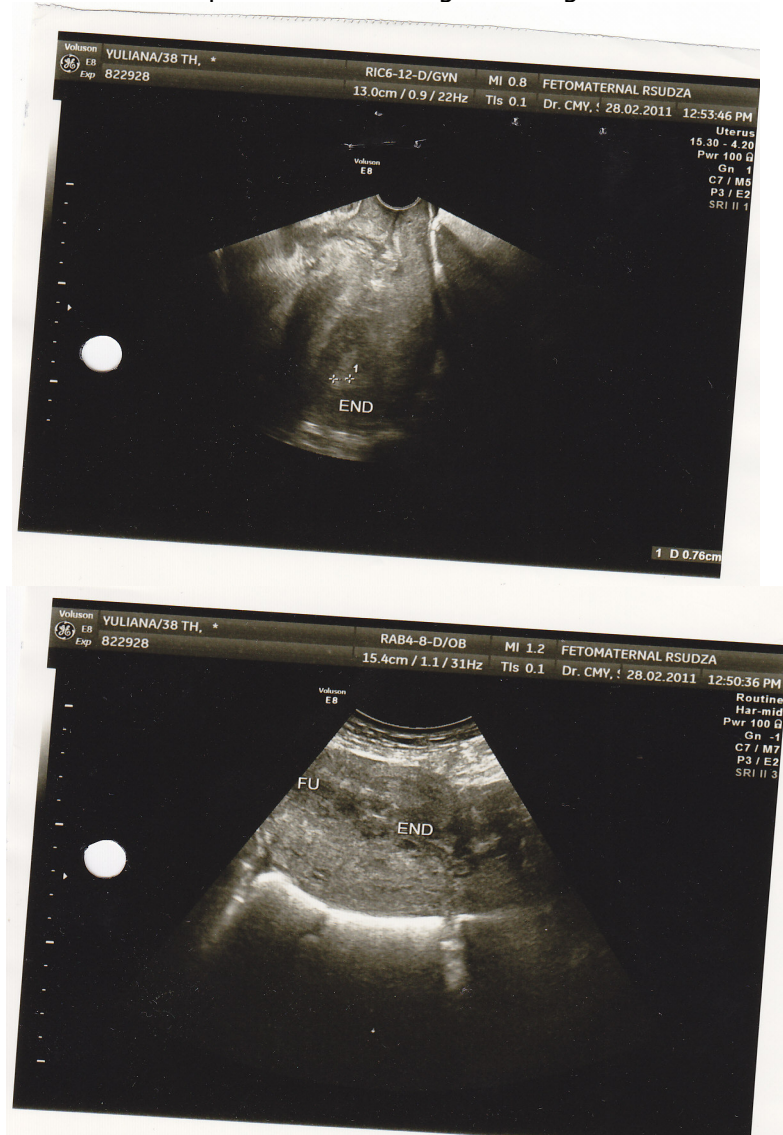


Figure 1. Subinvoluntary uterine

The second case was a 19 years old Indonesian women, parity 1, post-Caesarean section 120 days ago for CPD indication that comes with recurrent bleeding after the operation. Curettage of the endometrium had been done to the patient in Bireun Hospital prior to the Zainoel Abidin General Hospital, but the bleeding persisted. The patient came to our center also with hypovolemic shock and late post partum hemorrhage. The patient was ill-looking and clinically pale. The pulse rate was 120 beats per minute and the blood pressure was 90/70 mmHg. The respiratory rate was 22 cycles per minute. Abdominal sonography no abnormalities (Figure 2). Blood tests showed that the patient is severely anemic with hemoglobin 5.4 g/dl and an increase in the d-dimer level. The patient's blood group was A Rhesus positive. Packed red cells transfusion is then performed and the patient is then treated with norethisterone were also given tranexamic acid and Vit K injection. Ten days after the treatment the patient is discharged with good condition .

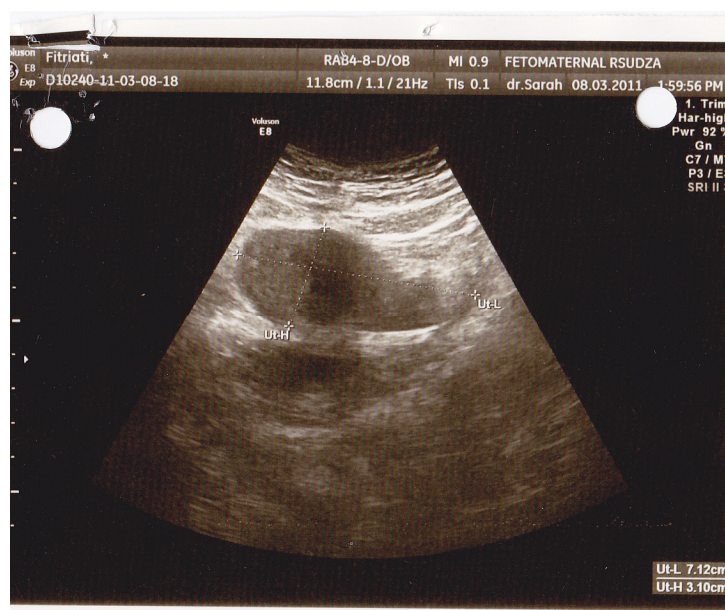


Figure 2. Normal uterine on USG examination

## Discussion

Subinvolution of the uterine describes an arrest or a retardation of uterine involution. It is accompanied by prolongation of lochial discharge and irregular or excessive uterine bleeding, which sometimes may be profuse. Both retention of placental fragments and pelvic infection may cause subinvolution (Groom and Jacobson, 2006). This results in failure of obliteration of blood vessels underlying the placental site, leading to prolonged bleeding. The two main causes of this are infection and inflammation (endometritis) and retained placental tissue. In the first patient we then diagnosed its causes as the first one (Sobieszczyk and Breborowicz, 2004).

Abnormal uterine bleeding is a common problem, and its management can be complex. Physicians are often unable to identify the cause of abnormal bleeding after a thorough history and physical examination. Abnormal uterine bleeding includes both dysfunctional uterine bleeding and bleeding from structural causes. While there is no apparent proof of structural abnormalities in the second patient, we then diagnosed it with dysfunctional uterine bleeding (SOGC, 2001). Dysfunctional uterine bleeding (DUB) is a diagnosis of exclusion when there is no pelvic pathology or underlying medical cause. DUB is typically characterized by heavy prolonged flow with or without breakthrough bleeding (Ely et al., 2006). It may occur with or without ovulation.

Evidence regarding the management of secondary postpartum hemorrhage is limited. The main aims of treatment are to provide basic resuscitation, establish a cause for the bleeding, and tailor the treatment (medical and/or surgical) according to the cause. The mnemonic of more knowingly H-A-E-M-O-S-T-A-S-I-S that commonly used for early PPH can also be used to make treatment more easily reproduced (Chandrahara, 2005). Restoration of circulating blood volume should be achieved by gaining intravenous access with two large-bore cannulae and administering intravenous fluids initially with physiological saline (up to 2 liters) and then with plasma expanders until blood is available.

In these 2 cases, there are different causes to each cases so it needs to be managed differently. Uterine subinvolution can be managed using Ergonovine or methylergonovine (Methergine), 0.2 mg every 3 to 4 hours for 24 to 48 hours, eventhough its efficacy is stil within question. The more important aspect is the infection that causes it (Groom and Jacobson, 2006) Despite the lack of evidence to support the presence of a specific bacterial pathogen, 92% of the women received antibiotics. Recommended choices of antibiotic treatment include amoxycillin with clavulanic acid and a combination of amoxycillin, metronidazole and gentamicin. Endometritis is a major contributor to subinvolution of the uterus.

Evaluation of patients with abnormal uterine bleeding and identifying those with dysfunctional uterine bleeding is achieved with a combination of the following: history physical examination; and judicious use of laboratory evaluation endometrial sampling and uterine imaging, with sonographic techniques (SOGC, 2001; Ely et al., 2006a; Ely et al., 2006b). At least 50% of women with anovulatory DUB experience successful regulation of their menses with norethindrone administered cyclically for approximately 10 days per month. Continuous administration of progestins may be more effective at treating ovulatory menorrhagia than cyclic dosing. However, there are no published data evaluating such an approach in women with DUB.

### **Conclusion**

Secondary postpartum hemorrhage is an important cause of maternal morbidity and mortality. Basic resuscitation followed by investigation and treatment of the specific cause of hemorrhage are essential. With many women delivering outside of hospitals and early postpartum hospital discharge being a growing trend, postpartum hemorrhage that presents to the emergency department may be either early or late. Late post partum hemorrhage though a minority still poses great risk to maternal health. Key management of both early and late HPP are rapid assesment and diagnosis of conditions, restoration of blood volume and simultaneously search for the cause. HPP diagnosis is confirmed by observing the amount of bleeding and the patient's clinical symptoms. Management of HPP requires teamwork and a systematic yet comprehensive management.

### **Acknowledgements**

My sincere thank to Obstetrics and Gynecology Department, Faculty of Medicine Syiah Kuala University, Banda Aceh, Indonesia. Also thank to all members of Obstetrics and Gynecology Department, Faculty of Medicine University of Indonesia for their supporting during the study.

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